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ABSTRACT

Two objectives of this bilingual vocational education project were to modify and translate vocational education curricula for bilingual students and students of limited English speaking ability and to document the process of material modification and translation in a procedural manual. A needs assessment was conducted at the secondary level surveying bilingual programs, students, and teachers in New York City schools. A search for suitable curricula to adapt for use of students of limited English speaking ability resulted in identification of materials on welding, marketing, auto body repair, receiver-drier, power mechanics, graphic arts, French knife, and auto mechanics. These were translated into Spanish and French. Problems encountered in translation included vocabulary (standard or vernacular) use, cultural accuracy, whether to use French or Creole, and format. Problems were documented and solutions provided in the curriculum development manual, which covers six topics: needs assessment, materials acquisition analysis, modification, materials translation, materials production, and field testing. Appended are the needs assessment data on bilingual vocational programs in New York City schools and a copy of the survey instrument. The manual is available separately as CE 020 121. (FP)

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ERIC

ED177292

FINAL REPORT

Vocational and Bilingual Curriculum Development: A Cooperative Effort

A project undertaken pursuant to Grant
No. G007604316, U.S. Office of Education,
Vocational Education Act, 1976

Department of Technology and Industrial Education
School of Education, Health, Nursing, and Arts Professions
New York University

Project Director
Ronald D. Todd, Ph.D.

CE 020 120

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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EDUCATION

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The project entitled "Vocational and Bilingual Curriculum Development: A Cooperative Effort" was located in the Department of Technology and Industrial Education at New York University.

The project had two main objectives:

A. To modify and translate vocational education curricula for the use of bilingual students (or students of limited English speaking ability).

B. To document the process of modification and translation of vocational education materials in a procedural manual.

Additionally the project was to provide for the dissemination of the materials translated into Spanish/English and French/English and the dissemination and distribution of the Manual to prospective users. For purposes of clarity, this narrative will treat objectives A and B separately.

A. Modification and Translation of Curriculum Materials (see accompanying PERT Chart).

Before the project could be undertaken a resource and talent pool had to be developed by the project director and coordinator. From the identified individuals the project staff was enlarged to eight people. They included the Project Director, the Coordinator of Curriculum Development, an Assistant Research Scientist (trilingual), a Media Specialist, and two Curriculum Writers (1 trilingual and 1 bilingual). In addition a group of consultants was identified for use when the need arose. The project's staff organization is shown in Figure 1.

A needs assessment at the secondary level consisting of two parts was conducted. Part one consisted of an overall survey that includes data on programs, students, and teachers. The data reflect numbers of vocational education programs that service students of limited English speaking ability and the program needs in terms of curriculum materials. Appendices I and II show the results of

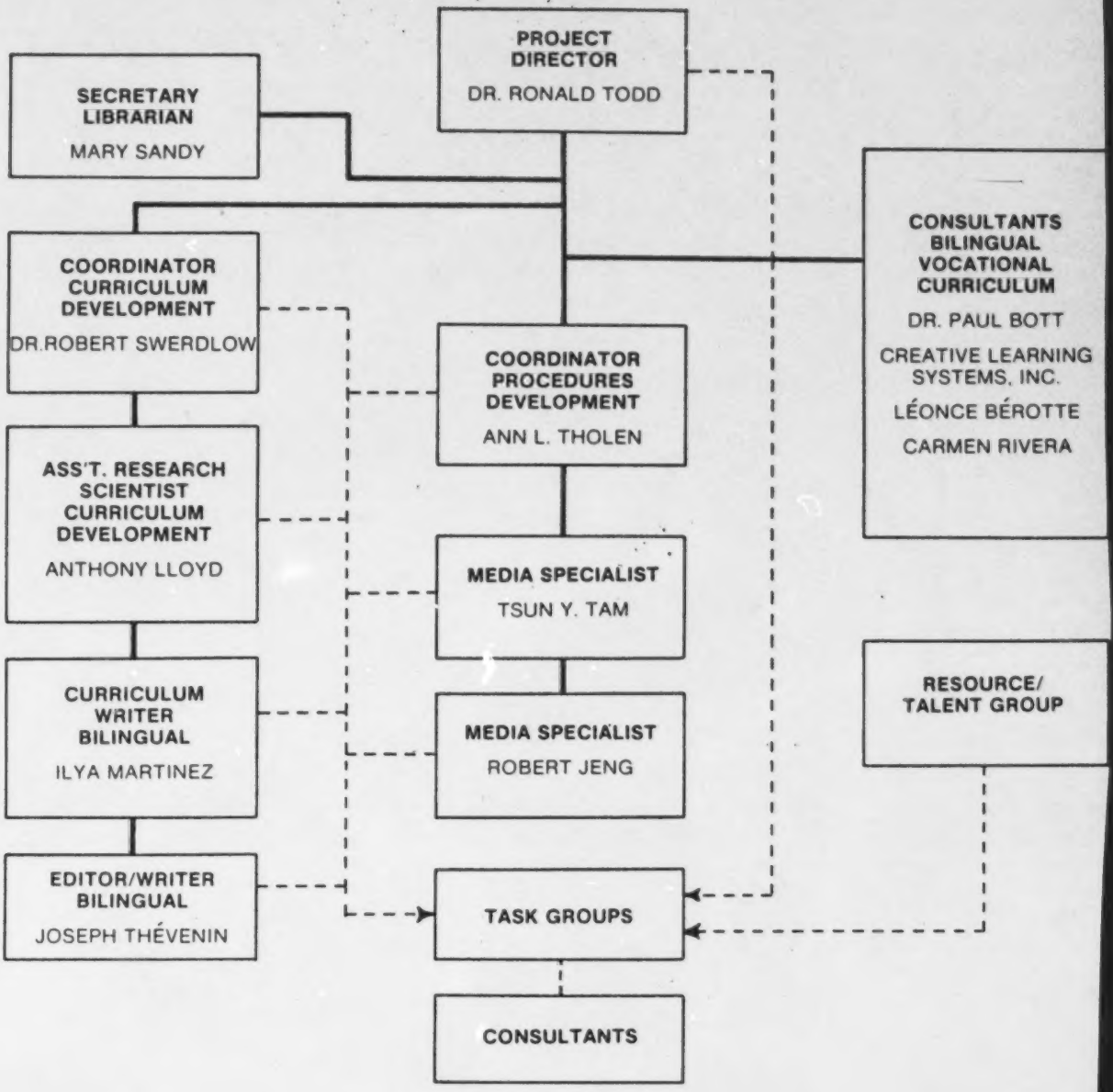
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Figure 1

that survey.

Part two of the needs assessment required that the staff develop an instrument. The instrument is based on a modified discrepancy model that elicits information about the actual state of things and about what ought to be, thus establishing a discrepancy. This in turn enabled the staff to develop curriculum to meet the description of what ought to be. Appendix III shows the instruments developed by the project staff.

The results of that survey reflected a definite need for bilingual student-oriented materials and a need for bilingual instructors.

During the course of the needs assessment a number of pertinent questions emerged that needed to be addressed in the subsequent Manual that would result from this project. Questions such as the following were discussed by the staff and with consultants and LEA personnel on many occasions. They became the focal questions and were addressed and re-addressed.

BILINGUAL PROJECT - NEEDS ASSESSMENT

I. PROGRAM NEEDS

1. Identify bilingual schools
2. Identify contact people in each school
3. Does school have Vocational Education Component?
4. Does school plan to add Vocational Component?
5. Are Vocational Education teachers bilingual?
6. Are monolingual teachers in need?
7. What are the present and proposed vocational areas?
8. What languages are needed?
9. Numbers of bilingual students?
10. Numbers of students served in each language?
11. Numbers with each language in Vocational Education?
12. Are guidance personnel in need of bilingual/bicultural orientation?
13. Are guidance personnel in need of vocational education orientation?

II. INSTRUCTIONAL MATERIALS NEEDS

1. What are the materials presently used?
2. What materials are needed?
3. Types of materials needed (texts, modules, learning packages, job sheets, visuals, etc.)?
4. Degree of sophistication (technicality)?
5. Reading level - illustration/text mixture?
6. Are teacher materials needed?

III. STUDENT NEEDS

1. Do students know that Vocational Education courses/programs are available?
2. Are students aware of "Union", "Societal" prejudices?
3. What would they like to study?

4. Student attitudes to Vocational Education and academics? (perhaps translate and administer attitudinal survey)
5. Parental attitudes?Cultural attitudes?
6. Specific occupations desired?
7. Student needs in terms of test styles? (Haitians favor essay as opposed to multiple choice)
8. Student need for structured vs. unstructured atmosphere? (teacher directed vs. media directed vs. independent study)
9. What kinds of materials are wanted: (from what kinds of materials can one learn best)
10. How do students feel about race and sex biases in textbooks?
11. Do any groups of students come into Vocational Education with certain technical skills because of general cultural emphasis on tool skill activities?
12. Which language does a student prefer to learn in?
13. How long have students been in the U.S.?

The results of the needs assessment enabled the staff to determine the work objectives for the project.

Before work on translation could begin it was necessary to determine if any bilingual, vocational education curriculum materials existed. Over two hundred letters of inquiry were sent to Universities, Bilingual Dissemination Centers and school districts. It was our purpose to discover possible existing bilingual, vocational education curriculum materials. Responses indicated that very few exist and that there is a definite need for them.

Two ERIC searches were conducted. One to determine the amount of materials in the system that were bilingual and vocational in nature. Seventy-five articles were found online and twenty-six offline on that subject but none offered student-oriented bilingual curricula.

A second search was conducted to find suitable curricula to adapt for the use of students of limited English-speaking ability. Ninety-two articles were found online. There were very few useful articles, however. One of those containing student-oriented curricula on TIG welding was chosen to be translated into French and Spanish in order to identify the problems inherent in the translation process. In addition,curricula on Marketing, Auto Body Repair, Receiver-Drier, Power Mechanics, Graphic Arts, French Knife, and Auto Mechanics were translated into Spanish and French. These items will be available in the original and in translation through the ERIC System.

During the process of translating the materials into French and Spanish, the following were identified as concerns:

1. Vocabulary -

   Should the text be written in standard language or in some vernacular? What are the technical resources that are available to the translator? How to choose the exact translation; is it the vocabulary actually in use or is it just "dictionary language?"

2. Culture -

Have the materials been translated culturally so as to complement the backgrounds of the target populations?. (e.g. Haitian students do not relate well to multiple-choice type questions).

3. French vs. Creole -

In the case of the texts being prepared for Haitians, should Creole also be used?

4. Format -

How should the translated materials be presented?
What to do about illustrations?
How should call-outs be handled?
If a control panel is illustrated should the labelling of the dials be translated or remain in English since the panels are actually labelled in English?

The project staff addressed itself to these concerns and after several meetings the following was decided:

1. Vocabulary -

In order to minimize problems in this area it was decided that an English-speaking person fully competent with regard to the knowledges, attitudes, and skills required in the craft or vocation in which materials are being translated be available as a technical resource to the persons undertaking the translation. Upon completion of the translation, the materials would be submitted for review to a person who is both fluent in the foreign language and a practioner of the craft or vocation under consideration.

2. Culture -

It was agreed that the best way to insure that instructional materials modified complement the backgrounds of the target populations would be to develop the written material from scratch. This approach would require that each writer possess linguistic, cultural, pedogogical, and technical competencies. A practical approach to the modification of bilingual culturally correct vocational materials could also result through the review process, as described in the Manual.

3. French vs. Creole -

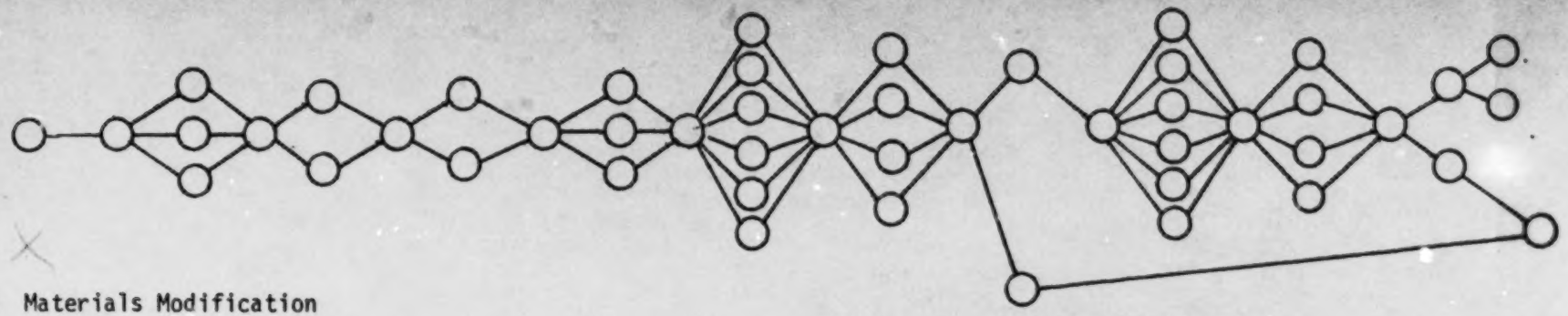
It was decided that the instructional materials translated for use by Haitian students would be prepared initially in French only. These would then be use-tested by Haitian speaking students. Creole vocabulary would be added if test site results so indicated.

4. Format -

Translated material will be presented in folio format. The English version will appear on the left hand side of the folio and the translated material will appear on the right. The position of illustrations

in the translated version will be indicated by a ruled box. Call outs for translated illustrations will appear within the ruled box. Labels on controls and dials will remain in English and suitable translation will be provided nearby (within parenthesis).

It became apparent through numerous sessions addressing the above questions that a system for analyzing and modifying curriculum materials prior to translation had to be developed. The methods for that analysis and modification are available in the resultant Manual.



1.0 Materials Modification

- 1.1 Establish Resource/Talent Pool
  - 1.11 Identify potential participants
    - 1.111 Bilingual
    - 1.112 Vocational
    - 1.113 Curriculum
  - 1.12 Screen individuals
  - 1.13 Select participatn.
- 1.2 Make Needs Assessment
  - 1.21 Program needs
  - 1.22 Student needs
- 1.3 Determine Objectives
  - 1.31 Program objectives
  - 1.32 Student objectives
- 1.4 Identify Available Curriculum Materials
  - 1.41 Identify potentially suitable materials
  - 1.42 Screen materials
  - 1.43 Secure materials
- 1.5 Apply Product Assessment Criteria
  - 1.51 Validity
  - 1.52 Appropriateness
  - 1.53 Feasibility
  - 1.54 Precision
  - 1.55 Consistency
  - 1.56 Comprehensiveness
- 1.6 Match Selected Materials and Objectives
  - 1.61 Analyze materials
  - 1.62 Identify objectives of materials
  - 1.63 Identify match of objectives
  - 1.64 Determine degree of match
- 1.7 Determine Suitability
  - 1.71 Modify materials
  - 1.72 Accept materials in present form
- 1.8 Modify Existing Materials
  - 1.81 Content
  - 1.82 Process
  - 1.83 Centers of attention
  - 1.84 Organizing themes
  - 1.85 Conceptual presentation
  - 1.86 Language
- 1.9 Field Test Materials
  - 1.91 Establish field test sites
  - 1.92 Prepare materials for field use
  - 1.93 Use materials
  - 1.94 Collect feedback data
- 1.10 Revise Materials and Procedures
  - 1.101 Analyze feedback data
  - 1.102 Determine need for revision
    - 1.1021 Revise appropriate materials
    - 1.1022 Revise appropriate procedures
  - 1.103 Prepare materials for dissemination

B. Development of Procedural Manual.

The accompanying PERT Chart shows the steps required to arrive at the development of the procedural manual entitled Bilingual Vocational Modification Translation Manual.

The following narrative describes the problems encountered in developing each of the eight modules and some of the solutions to meet those problems. A more complete description of those solutions is available in the Manaul itself which accompanies this narrative.

Module I: Introduction

One of the most difficult modules to write was the Introduction. It was the last module to be written. Specific problems encountered in developing this module included the following:

Problem I: How to define bilingual vocational education?

Problem II: What is the role of English as a Second Language in bilingual vocational education:

Problem III: What basic competencies must a person possess in order to teach in a bilingual vocational education setting?

Problem IV: Could a monolingual teacher conceivably be trained to function in a bilingual setting? If so, what minimum competencies should be acquired?

The Introduction, Module I addresses the above issues.

Module 2: Needs Assessment

In writing this module, the staff had to define Needs Assessment within the context of vocational curriculum development. The staff also had to decide what type of needs assessment best suited that context; and, further, what sort of instrument should be used.

It was decided that a modified discrepancy-based model best suited the project's purposes. This type of needs assessment seemed appropriate because

it is relatively easy for a beginner to use. A questionnaire was developed that contains "should be" types of statements.

Problem I: What types of issues should an instrument of this type address?

Solution: The project staff discussed the process of curriculum development in work sessions held over a six week period. The thoughts of the project staff members, consultants, and resource people were recorded on 3X5 cards. These cards were then physically moved around during analysis and synthesis sessions in order to determine a suitable conceptual map of the curriculum development process.

Problem II: Where do the students' cultural and linguistic differences fit in?

Solution: After a great deal of discussion, the staff unwillingly had to drop those aspects from the needs assessment since the instrument addressed only those needs as defined within curriculum material. The students' needs were left to be considered in the modification module. Though practical, this was not an ideal solution.

Module 3: Materials Acquisition Analysis

Since the project could only use copyright-free materials, it was difficult to acquire many useable documents. The information contained in Module 3 is technically correct, but will yield few useable items until more comprehensive curriculum resources of this type become available.

Definition: Criteria for useability were established and formulated into an analysis chart to be used by a curriculum developer. This chart used the seven categories and "is/are" type questions. The criteria for useability are then the results of a comparison between Needs Assessment instrument and the Materials Analysis instrument. If those criteria for useability were not met by comparing the two instruments, then a case for modification might

be made. For example, as shown on pages 4.1 and 4.2 of the Manual:

"The amount of modification needed is determined by comparing the chart derived from the Needs Assessment with the chart derived from the Materials Analysis sequence. The results from your Needs Assessment chart should look like Figure 1.

CONTENT

Contents should be presented in a simple manner.

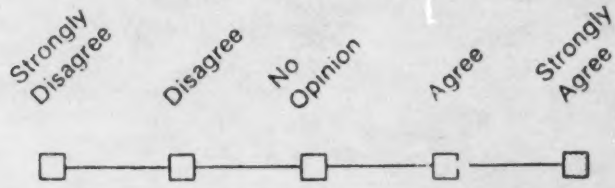


Figure 1. Sample indicator derived from the Needs Assessment in the category of "Content"

The results from your Materials Analysis chart should look like Figure 2.

CONTENT

Contents are presented in a simple manner.

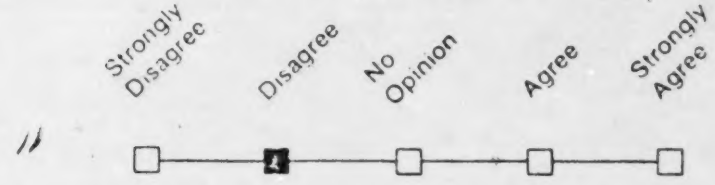


Figure 2. Sample indicator derived from Materials Analysis in the category of "Content"

When both profiles are placed on the same set of scales, the degree of descrepancy between the actual and desired forms of the content are shown graphically. This mismatch is shown in Figure 3.

CONTENT

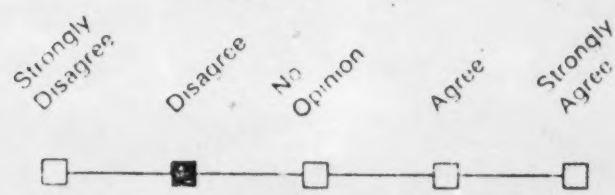


Figure 3. Sample discrepancy of desired characteristics in the category of "Content"

The distance between the two indicators shows graphically the degree and the direction of mismatch between the two profiles. A gross mismatch may make it very difficult to modify a given text. A small mismatch would indicate that the content may be usable with bilingual students. For example, the content of learner materials may be too abstract and require modification to make that content more concrete. On the other hand, some materials may be too concrete and may require an increased level of abstraction."

Problems: Initially both the Needs Assessment instrument ("should" type questions) and Materials Analysis instrument ("is/are" type questions) were contained in the same module until it became clear that for purposes of clarity and useability it was better to divide them into separate areas of consideration.

The Needs Assessment and Materials Analysis instruments were tested and used by the project staff and consultants to select suitable materials for modification and translation on the part of the staff. It was found that the instruments provided a standardized way of choosing materials.

It was found, however, that it was necessary to give the consultants a short orientation in the use of the instruments to improve their validity.

Module 4: Modification

Since this module is the heart of the whole matter, a series of adaptations was required to make it clear and useful for the curriculum developer.

In developing the Modification Module 4, the staff had to devise ways of showing the curriculum developer how to achieve the needed modifications as they became apparent through a comparison of the Needs Assessment and Materials Analysis instruments.

Problem I: Initially the staff attempted to develop a chart to be followed by the curriculum developer in modifying curriculum, but the chart form proved to be difficult to use or follow. It was therefore decided to develop short, concise verbal instructions to follow in modifying curriculum in the seven established categories and their several dimensions. For example:

If Comparison of the Needs Assessment and the Materials Analysis shows that:	Then:
Objectives:	
Objectives are not consistent with content.	Analyze the content to determine information, concepts, supporting information, and activities in the content. Compare these with the stated objectives of the unit If the objectives are found to be inconsistent with the content change them to correspond with the identified concepts, supporting information and activities. Eliminate extraneous objectives. Add necessary objectives.

Problem II: Where do the student and his/her linguistic and cultural needs fit in when considering the modification/translation process? And, in turn where in the handbook should those dimensions be considered?

It was decided that the most logical, if not most convenient, section to consider the needs of the student of limited English speaking ability was in the Modification Module 4.

Precise instructions on how to prepare a student profile were devised. They include (1) a short description of the effects of language and culture on the learning process; (2) the collection of baseline data; (3) a list of questions intended as an aid to determining even more precisely the cultural and educational characteristics of bilingual students (or students of limited English speaking ability).

In addition, further information about the Puerto Rican and Haitian cultures were included in the Appendix to the Materials Modification Translation Manual.

In order to illustrate some of the elements of modification as described in Module 4, before and after case studies were included.

Module 5: Materials Translation

The principal difficluty in writing this Module consisted in identifying and formulating all the factors to be borne in mind during translation. To a skilled translator, such factors are largely a matter of instinct; the project staff therefore had to place themselves in typical translation situations and then debrief each other in order to identify in precise terms the kinds of problems encountered in translation. The next step in this process was to determine the identified problems.

The project staff also felt obliged to take a stand on the question of translation into standard language verses vernacular. It was decided to recommend that translation should be into standard forms of language with parenthetical vernacular equivalants--a system which the project staff considers to have practical value though it may not satisfy purists on either side.

In the matter of assessment of translation, there is considerable overlap with the criteria for materials analysis. A notable additional factor however, is that of reading level. Reading level in English language materials is easily assessed by means of existing formulas. However, reading levels can change through the medium of translation; it was therefore necessary to caution the manual user to be sure to keep that in mind.

Module 6: Materials Production

Through the conferencing involved in the original needs assessment, it was determined that individuals who develop curriculum materials may have little or no understanding of the production process. This module was developed to deal with that problem. The Module is self-explanatory and is useful for the person who has little experience in design and production. Because of their direct involvement in material development the team of consultants used to design the manual was also used to write this module.

Module 7: Field Testing

In trying to describe a field test process of the modified and translated materials, it was necessary to formulate precisely the process to be followed.

Problem I: How to define the several interrelated steps as separate steps while preserving their cohesive relationship?

Solution: Five areas of concern were devised for collection of information on trial use of materials and analysis of that information. These five steps were:

1. Needs assessment instrument completed by teachers and students.
2. A student pre-test
3. Trial use of materials
4. Student post-test
5. Materials analysis instrument

The module then defines the procedure for a) interpreting pre- and post-test scores and b) interpreting the Needs Assessment and Materials Analysis questionnaires.

Several modifications were necessary to clarify the procedures involved in field-testing and to enumerate possible unexpected problems that might be encountered in the field test.

Module 8: Glossary, Bibliography and Appendices

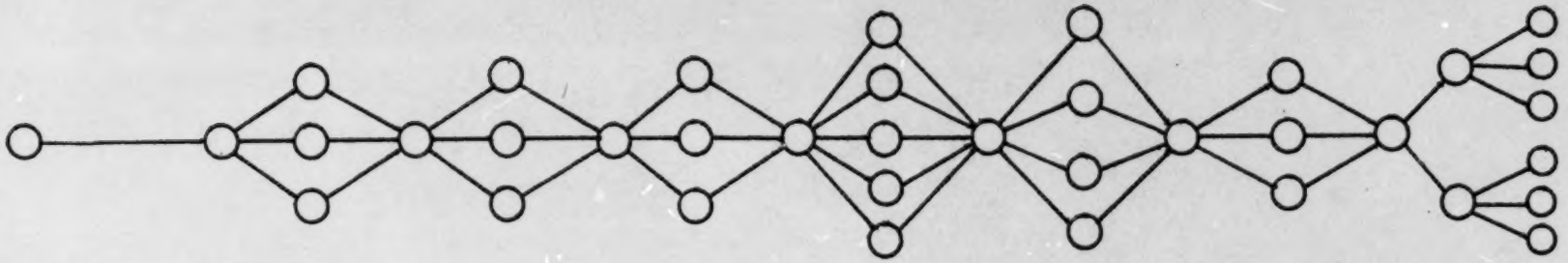
The final sections of the Manual contain supplementary information for a user of the Manual.

The Glossary contains definitions of the key concepts and assumptions used in the Manual; in all instances, the words in the Glossary are included and specifically defined or are clearly understandable in the text, but the Glossary provides a more comprehensive explanation.

The Bibliography was developed to provide resources relating to vocational curriculum and, more importantly, the questions of cultural relativity that

underlie the modification processes described in the Manual.

The materials in the Appendices provide in-depth background information on Puerto Rican and Haitian students, two of the larger groups likely to be involved in bilingual teaching and the target populations for this project. These background studies also serve as patterns for the kind of information that should be collected as a basis for a student profile prior to the process of materials modification.



2.0 Procedures Development

- 2.1 Determine Consultant Support
  - 2.11 Identify potential candidates
  - 2.12 Screen candidates
  - 2.13 Select consultants
- 2.2 Develop observational Instruments
  - 2.21 Conduct literature search
  - 2.22 Secure appropriate observational instrument
  - 2.23 Develop observational instrument
- 2.3 Analyze Curriculum Development Process
  - 2.31 Establish techniques of documentation
  - 2.32 Document developmental process
  - 2.33 Analyze data
- 2.4 Develop Prototype Model
  - 2.41 Identify reoccurring elements
  - 2.42 Identify relationships of elements
  - 2.43 Develop protocol
  - 2.44 Reality test protocol
  - 2.45 Describe procedural model
- 2.5 Develop Procedural Guide
  - 2.51 Describe procedures
  - 2.52 Develop prototype guide
  - 2.53 Reality test procedures and guide
  - 2.54 Modify procedural guide
- 2.6 Prepare Final Product
  - 2.61 Design guide format
  - 2.62 Prepare art copy
  - 2.63 Develop finished prototype
  - 2.64 Review finished protopype
  - 2.65 Revise guide
  - 2.66 Produce procedural guide
- 2.7 Disseminate Product
  - 2.71 Curriculum practitioners
    - 2.711 State departments
    - 2.712 Regional labs
    - 2.713 Large Cities
  - 2.72 Training Institutions
    - 2.721 Appropriate colleges and universities
    - 2.722 Private training agencies
    - 2.723 Other

APPENDIX I

Vocational High Schools

No listed indication of need for bilingual curricula except where noted*.

Manhattan:

Chelsea Vocational High School
131 Avenue of the Americas
925-4313

Mabel Dean Bacon
127 East 22nd Street
475-6892

Manhattan Vocational Technical
320 East 96th Street
369-1090

N.Y. School of Printing
439 West 49th Street
245-6158

Bronx:

Grace H. Dodge Vocational High School
2474 Crotona Ave.
Bronx 10458
584-6951

Samuel Gompers High School
455 Southern Blvd.
Bronx 10455
665-1412
Vocational-Technical- design, repair and operation of electrical and electronic equipment.

Brooklyn:

Alexander Hamilton Vocational and Technical High School
150 Albany Avenue
Brooklyn 11213
774-0739

Automotive High School
50 Bedford Ave.
Brooklyn 11223
388-7455

Brooklyn Technical High School
29 Fort Greene Place
Brooklyn 11217
858-4356

*East New York Vocational and Technical High School
1 Wells St.
Brooklyn 11208
277-1266
(Bilingual ESL) Frances S. Tress

Brooklyn (cont.)

*Eli Whitney Vocational High School
257 North 6th Street
Brooklyn 11211
387-7669

George Westinghouse Vocational and Technical High School
105 Johnson St.
Brooklyn 11201
625-6135

Wm. E. Grady Vocational Technical High School
25 Brighton 4th Road
Brooklyn 11235
332-5003

*Wm. H. Maxwell Vocational High School
145 Benna Ave.
Brooklyn 11207
345-9101
(ESL and Bilingul)

Queens:

Queens Vocational High School
37-02 47th Ave.
Long Island City 11101
937-3010

Thomas A. Edison Vocational High School
165-65 84th Ave.
Jamaica 11432
297-0626

Staten Island:

Ralph R. McKee Technical-Vocational High School
290 St. Mark's Place
Staten Island, N.Y. 10301
447-7767

Schools in the Five Boroughs that have a possible need of Bilingual Vocational Education Curricula
Information derived from a Directory of the Public High Schools, Board of Education of the City of New York, 1976-77.

Manhattan:

School Name	Address	Guidance Telephone No.	Subjects Taught Indicating Need for Bilingual Curricula
Benjamin Franklin	FDR Drive & 16th St.	876-4695	In Spanish there are special classes for native speakers High Speed Production Printing, including letterpress and offset lithography.
Charles Evans Hughes	351 West 18th St.	CH3-5636	English as a Second Language (ESL) Technical Electricity major Industrial Arts
George Washington	549 Audubon Ave.	927-1845	Spanish for Spanish-speaking Para-medical, printing, radio and electronics, auto shop
Martin Luther King, Jr.	122 Amsterdam Ave.	874-1202	Bilingual Program Vocational Department
Washington Irving	40 Irving Place	674-5079	ESL Food, clothing, child care services
Bronx:			
Adlai Stevenson	1980 Lafayette Ave. Bronx 10473	931-3847	ESL, Bilingual 1. Vocational and Technical Metal Work Center 2. Child Care Training Center 3. Automotive Training Center
Alfred E. Smith	333 E. 151 St. Bronx 10451	993-5260	Spanish taught 28 vocational shops

School Name	Address	Guidance Telephone No.	Subjects Taught Indicating Need for Bilingual Curricula
Bronx (cont.)			
DeWitt Clinton	Mosholu Parkway & Paul Avenue Bronx 10468	543-1004	ESL Shared Instructional Services Auto mechanics
Evarder Childs	800 E. Gun Hill Rd. Bronx 10467	547-8585	Spanish for Spanish speakers "several courses related to vocational interests"
Herbert H. Lehman	300 E. Tremont Ave.	824-2088	ESL, Bilingual World of Construction vocational, technical
James Monroe	1300 Boynton Ave. Bronx 10472	893-5739	ESL, Bilingual Cooperative Education employment service
Walton High School	West 196th St. & Reservoir Ave.	298-1420	ESL Occupational Education
Brooklyn:			
Boys and Girls High School	1700 Fulton St.	467-1700	ESL, Bilingual specialized shops, construction, automotive, wood, metal, and graphic arts
East New York Vocational & Technical High School	1 Wells Street	277-1266 Frances Tress	ESL, Bilingual Technical Machine Design and Construction; Electrical Installation & Practice; Machine shop; Woodworking; Radio & TV
Eastern District High School	227 Marcy Ave.	782-0838	Bilingual Industrial Arts

School Name	Address	Guidance Telephone No.	Subjects Taught Indicating Need for Bilingual Curricula
Brooklyn (cont.)			
Franklin K. Lane	999 Jamaica Ave.	277-3260	ESL, Bilingual Cooperative Education Five goal-oriented Career Institutes, including Business, Industry & Tech.
James Madison	3787 Bedford Ave.	377-7055	ESL, Cooperative Education
John Jay	237 Seventh Ave.	788-1654 Julian Weiss	ESL, Bilingual Cooperative Education Shared Instruction
Lafayette	2630 Benson Ave.	372-4295	ESL, Cooperative Education School to Employment (STEP) Shared Instruction
Thomas Jefferson	Penna. & Dumont Aves.	342-3811	ESL electronics, industrial arts, home economics, ceramics household mechanics, occupational training.
Wm H. Maxwell	145 Penna. Ave.	345-9101	ESL, Bilingual Distributive Education, Fashion, Cosmetology
Queens:			
Flushing High School	35-10 Union St. Flushing	359-0179	ESL, Bilingual Cooperative Education Program
Hillcrest	160-05 Highland Ave. Jamaica	658-5460	ESL Electro-mechanical technology

School Name	Address	Guidance Telephone No.	Subject Taught Indicating Need for Bilingual Curricula
Queens (cont.)			
Newtown	48-01 90th Street	592-4306	ESL, Bilingual mechanical drawing, woodwork, patternmaking, sheet metal, electricity, machine shop, mechanical and architectural drawing.
Wm. Cullen Bryant	48-10 31st Ave.	278-7735	ESL, Bilingual Industrial Arts: wood, metal and plastics "students of multi-ethnic backgrounds"
Staten Island:			
Curtis	Hamilton Ave. and St. Mark's Pl.	447-4335	ESL graphics, electronics

ESEA Title VII High School Programs that include (or hope to include) Vocational Education Courses

High School	Name of Program	Director	Address	Subjects Taught	Comments
Adlai E. Stevenson	Target & Population Comprehensive Bilingual Program Hispanic (300 students, 30 in Voc. Education)	Alfred Riccardi 931-6776	1980 Lafayette Ave. Bronx, N.Y. 10473	Health Sciences Medical Technology (lab oriented)	Beginning Program Producing own Materials
Bushwick	Bilingual/Bicultural Program 355 Hispanics Haitians in ESL only	Mrs. Funes 381-7100	400 Irving Ave. Brooklyn, N.Y. 11227	Foods	
George Washington Wingate	Intergrated Bilingual Career Education Project 212 Haitians (potential: 350	Lucy Capossela 467-7400 Ext. 2	600 Kingston Ave. Brooklyn, N.Y. 11203	Photography, Metals Automotive, Woods (sometimes)	Beginning Program, using Board of Ed. Materials and producing their own Staff of 4 (1 Haitian)
James Monroe	Bilingual Program	Lourdes Garcia de Riley 893-6454	1300 Boynton Ave. Bronx, N.Y. 10472	Secretarial	
Louis D. Brandeis	Bilingual Program Hispanic, Haitian	Sonia Rivera 799-1570	145 West 84th St. New York, N.Y. 10024	Career Ed. (Driver Ed.) Automotive Mechanics, Stenography	Some go to shared Instruction

High School	Name of Program	Director	Address	Subjects Taught	Comments
Newton	Bilingual/Bicultural Program Hispanic	Ms. Hansen 592-4141 Technical Studies Supervisor- Mr. Hockman	48-01 90th St. Elmhurst, Queens 11373	Future program planned in Woods, Metals, Automotive	Mr. Hockman wants to include students from the bilingual program in his program. Would welcome our assistance.
South Shore	Bilingual Program Haitians, 110 Hispanic, 25	Frank Puleo 444-5663 Ann Ellman (counsellor) 531-4454	6565 Flatlands Ave. Brooklyn, N.Y. 11236	Some Shop, Typing	Wish to develop something further.
Sarah J. Hale	Project SABER 150 Hispanics 330 Haitians (not included in program)	Albba N. Delvalle 852-4231	345 Dean St. Brooklyn, N.Y. 11201	Business Education Cosmetology	Study Auto Mechanics at Automotive H.S. Have some Spanish Materials for Bus. Ed. and Cosmetology acquired from Lectorum Publications. Would welcome our help.
Theodore Roosevelt	Bilingual Program Hispanic	Francisca Colon 295-4976	500 E. Fordham Rd. Bronx, N.Y. 10458	Shop Subjects; Metals, Wood, Electricity, Mechanical Drawing, Automotive	Subjects available at the school, but bilingual students do not take them due to already packed schedules.

High School	Name of Program	Director	Address	Subjects Taught	Comments
John Brown	Bilingual Program 160 Hispanic	Gladys Fischoff 263-1919	63-25 Main St. Flushing, N.Y. 11367	Business Subjects	Business component just started. Needs: 1. Typing- with tapes 2. Record keeping texts 3. Speed writing texts 4. Syllabi with lesson plans.
Bilingual Program in Auxiliary Services for High Schools		John Acompore Bilingual Coord. 292-7427	431 Jackson Ave. Bronx, N.Y. 10455		Primarily a counselling and referral service; send some to Shared Instruction
Board of Education	Comprehensive High School Program	Manuel Dereu 625-6554,5	66 Court Street 15th Floor Brooklyn, N.Y. 11201		Mr. Dereu felt we are entering "virgin territory that will present pedagogical and technical problems. Though his field is not Voc. Ed. he observes programs and knows their problems. There is no bilingual/Voc. Ed. person at the Board of Education. Mr. Dereu is supportive and will confer with us.

APPENDIX II

APPENDIX II

School	Annual School Census October 31, 1975 New York Board of Education: Total Population	Number Hispanics	Percent Hispanics	Project Needs Assessment: Total Population	Number Hispanics	Percent Hispanics	Number Haitians	Bilingual Program	Bilingual Instructors
Manhattan									
Chelsea Voc.	1188	465	40%	No Response					
Mabel D. Bacon	1196	649	54%	1100	7 or 8			-	
Manhattan Voc. Tech	1471	614	42%	1800		52%	Some uncounted	-	0
N.Y. School of Printing	1689	614	36%	1500		40%	Some uncounted	-	
Bronx									
Grace H. Dodge	2067	1128	55%	2000		55%		-	2
Samuel Gompers	1612	797	14%	1475	708	48%	150	60	
Jane Adams	1306	602	46%	1375	687	50%	111	-	-
Alfred Smith	3114	424	14%	No Response					
Brooklyn									
Alexander Hamilton	2423	331	28%	Bilingual students transfer to other schools					

School	Annual School Census October 31, 1975 New York Board of Education			Project Needs Assessment					
	Total Population	Number Hispanics	Percent Hispanics	Total Population	Number Hispanics	Percent Hispanics	Number Haitians	Bilingual Program	Bilingual Instructors
Brooklyn Cont.									
Automotive	1523	596	40%	1600		0.1%		Shared Instruction 25 Hispanic; 25 Haitian	
Brooklyn Tech	5502	565	10%	5600		12%	Some	-	
E. New York Voc. Tech	1976	868	44%	1800	150	8%		+	3
Eli Whitney	2423	1082	45%	No Response					
Westinghouse	2198	700	32%	2000		30%	30	-	2 teach in Eng.
Wm. Grady	2126	188	8%	2125	157	5%	Uncounted	-	
Maxwell Voc. H.S.	1713	812	47%	1600	80	5%		+	
Queens									
Queens Voc. High School	1307	195	15%	1275		15%		-	-
Staten Island									
McKee Tech Voc. H.S.	Not listed			1142		5%		-	

APPENDIX III

BILINGUAL VOCATIONAL EDUCATION CURRICULUM DEVELOPMENT PROJECT

A Federally funded project through the Vocational Education Act to the Department of Technology and Industrial Education, New York University.

SURVEY

Instructions: Please provide your opinions on all statements to the best of your ability. There is no right or wrong answer. This information will be used to provide direction in the improvement of vocational education experiences for the bilingual student and the student of limited English speaking ability.

Definitions: For the purposes of clarity definitions of the following terms are provided.

Bilingual students: A bilingual student is capable of learning in two languages.

Student of limited English speaking ability: This student cannot learn in English, but can learn in his/her native language. This student is probably taking ESL courses.

Cultural background: A person's way of relating to others based on cultural conditioning. For the teacher, this means different body language, expectations of teacher, and learning styles.

Scale: 1-Strongly Agree 2-Agree 3-No Opinion 4-Disagree 5-Strongly Disagree

The following statements call for responses regarding MATERIALS:

1	2	3	4	5			1	2	3	4	5
—	—	—	—	—	1. Bilingual students do gain English skills as a direct result of using bilingual vocational educational materials.	1. Bilingual students should gain English language skills as a direct result of using bilingual vocational education materials.	—	—	—	—	—
—	—	—	—	—	2. Instructional materials are now being written only in English.	2. Instructional materials should be written only in English.	—	—	—	—	—
—	—	—	—	—	3. Instructional materials are now being written in English and the target language.	3. Instructional materials should be written in English and the target language.	—	—	—	—	—
—	—	—	—	—	4. Graphic materials are now being used in place of written materials.	4. Graphic materials should be used in place of written materials.	—	—	—	—	—
—	—	—	—	—	5. Materials used by Haitian students now include explanations in Creole.	5. Materials used by Haitian students should include explanations in Creole.	—	—	—	—	—
—	—	—	—	—	6. Instructional materials used by Hispanic students now include New Yorican vocabulary.	6. Instructional materials used by Hispanic students should include New Yorican vocabulary.	—	—	—	—	—
—	—	—	—	—	7. Instructional materials do help students gain English skills.	7. Instructional materials should help students gain English skills.	—	—	—	—	—
—	—	—	—	—	8. Instructional materials now help students gain vocational skills.	8. Instructional materials should help students gain vocational skills.	—	—	—	—	—
—	—	—	—	—	9. Instructional materials do help students gain skills in their native language.	9. Instructional materials should help students gain skills in their native language.	—	—	—	—	—
—	—	—	—	—	10. Bilingual instructional materials are useful in teaching manipulative skills.	10. Bilingual instructional materials should be useful in teaching manipulative skills.	—	—	—	—	—
—	—	—	—	—	11. Bilingual printed materials are not needed to teach skills.	11. Bilingual printed materials should be used to teach skills.	—	—	—	—	—
—	—	—	—	—	12. Audio tapes are used to support bilingual instructional materials.	12. Audio tapes should be used to support bilingual instructional materials.	—	—	—	—	—

1	2	3	4	5		
—	—	—	—	—	13. Audio visuals are used to develop English language skills in a vocational education setting.	13. Audio visuals should be used to develop English language skills in a vocational education setting.
—	—	—	—	—	14. Audio visuals are used in place of printed matter in the vocational education setting.	14. Audio visuals should be used in place of printed matter in the vocational education setting.
—	—	—	—	—	15. There are adequate materials to teach vocational skills to bilingual students.	15. There should be adequate materials to teach vocational skills to bilingual students.
—	—	—	—	—	16. Teachers are able to generate necessary materials for bilingual vocational education.	16. Teachers should be able to generate necessary materials for bilingual vocational education.

The following statements call for responses regrading PROGRAM:

1	2	3	4	5		
—	—	—	—	—	17. All verbal instruction is in English.	17. All verbal instruction should be in English.
—	—	—	—	—	18. Teaching is done in English and reinforced in the native language.	18. Teaching should be done in English and reinforced in the native language.
—	—	—	—	—	19. Bilingual students are used as interpreters in a classroom where there are students of limited English speaking ability.	19. Bilingual students can be used as interpreters in a classroom where there are students of limited English speaking ability.
—	—	—	—	—	20. It is more important to provide bilingual students and students of limited English speaking ability with English skills than with vocational skills.	20. It should be more important to provide bilingual students and students of limited English speaking ability with English skills than with vocational skills.
—	—	—	—	—	21. Current vocational programs fit the needs of the bilingual students.	21. Current vocational programs should be changed to fit the needs of the bilingual students.
—	—	—	—	—	22. Vocational education is appropriate for students of limited English speaking ability.	22. Vocational education should be appropriate for students of limited English speaking ability.

The following statements call for responses regarding STUDENTS:

1	2	3	4	5		
—	—	—	—	—	23. Haitian students can read Creole.	23. Haitian students should be able to read Creole.
—	—	—	—	—	24. All students can read in English.	24. All students should be able to read in English.
—	—	—	—	—	25. Bilingual students can read their native language.	25. Bilingual students should be able to read their native language.
—	—	—	—	—	26. Bilingual students are taught separately from the rest of the school.	26. Bilingual students should be taught separately from the rest of the school.
—	—	—	—	—	27. Bilingual students can read English materials at their grade level.	27. Bilingual students should be able to read English materials at their grade level.
—	—	—	—	—	28. Bilingual students can best be taught in a mixed language setting.	28. Bilingual students should be taught in a mixed language setting.
—	—	—	—	—	29. Students of limited English speaking ability can learn English and succeed in their vocational area.	29. Students of limited English speaking ability should learn English to succeed in their vocational area.
—	—	—	—	—	30. Students of limited English speaking ability are guided into vocational programs.	30. Students of limited English speaking ability should be guided into vocational programs.
—	—	—	—	—	31. Students of limited English speaking ability are placed in appropriate vocational settings upon graduation.	31. Students of limited English speaking ability should be regularly placed in appropriate vocational settings upon graduation.
—	—	—	—	—	32. Bilingual students are guided into vocational programs.	32. Bilingual students should be guided into vocational programs.
—	—	—	—	—	33. Upon graduation bilingual students are easier to place than students of limited English speaking ability.	33. Upon graduation bilingual students should be easier to place than students of limited English speaking ability.

1	2	3	4	5
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—

The following statements call for responses regarding TEACHERS:

1	2	3	4	5		
—	—	—	—	—	34. Instructors of Haitian students can speak Creole.	34. Instructors of Haitian students should speak Creole.

1	2	3	4	5
—	—	—	—	—

1	2	3	4	5		
—	—	—	—	—	35.	Vocational instructors of bilingual students can speak English and the student's native language.
—	—	—	—	—	36.	Vocational instructors of students of limited English speaking ability can speak English and the students' native language.
—	—	—	—	—	37.	A para-professional who speaks the student's native language is sufficient to handle language problems in the classroom or shop.
—	—	—	—	—	38.	A monolingual teacher is comfortable using bilingual materials.
—	—	—	—	—	39.	The teacher of a bilingual group can use bilingual materials.
—	—	—	—	—	40.	Vocational instructors of bilingual students are prepared to teach in a bilingual setting.
—	—	—	—	—	41.	Vocational teachers are currently trained in the cultural background of the students.
—	—	—	—	—	42.	Current preparation of vocational teachers of bilingual students is adequate.
—	—	—	—	—	43.	Current preparation of vocational teachers of students of limited English speaking ability is adequate.

1	2	3	4	5		
—	—	—	—	—	35.	Vocational instructors of bilingual students should be able to speak English and the student's native language.
—	—	—	—	—	36.	Vocational instructors of students of limited English speaking ability should be able to speak English and the students' native langauge.
—	—	—	—	—	37.	A para-professional who speaks the student's native language should be employed to handle language problems in the classroom or shop.
—	—	—	—	—	38.	A monolingual teacher would be comfortable using bilingual materials.
—	—	—	—	—	39.	The teacher of a bilingual group should use bilingual materials.
—	—	—	—	—	40.	Vocational instructors of bilingual students should be prepared to teach in a bilingual setting.
—	—	—	—	—	41.	Vocational teachers should be trained in the cultural background of the students.
—	—	—	—	—	42.	Additional training should be provided for vocational teachers of bilingual students.
—	—	—	—	—	43.	Additional training should be provided for vocational teachers of students of limited English speaking ability.